

62 provide improved mechanical strength of said package.
Cord

REMARKS

This Response to the Office Action of 09/08/00 is being submitted in response to the Office Action mailed September 8, 2000.

The Examiner rejected claims 1-7 under 35 USC 112, second paragraph.

The Examiner rejected claims 1-7 under 35 USC 103(a) over McCormick in view of Wilfinger and Matsumura.

Rejections Under 35 USC 112

In claims 1-7, the Examiner objects to the term "carried within", arguing that the transformers cannot be carried within the package. The Examiner argues that the transformers are a part of the package. Applicant respectfully traverses, but has removed the term "carried", since the transformers are clearly "within" the package, whether carried or contained within the package or forming a part of the package.

It is believed that claims 1-7 as amended are in compliance with 35 USC 112, second paragraph.

Rejections Under 35 USC 103(a)

The Examiner rejected claims 8-17 under 35 USC 103(a) over McCormick in view of Matsumura. The Examiner argues that McCormick discloses "a plurality of terminal pins molded within the side wall of the package". The Examiner further argues that McCormick discloses "one end of the terminal pin forming a solder post extending through and below a bottom of the side wall; [figures 1, 2]."

Applicant respectfully traverses. It is believed that McCormick shows two principal packages:

1. A first package with loose terminal pins inserted through holes in a package or header, and
2. A second package with the terminal pins plated onto interior surfaces of the package.

Applicant respectfully submits that the first package of McCormick requires that the pins be loose with respect to the package, not molded within. The pins in this package are partially, but not fully, inserted into the package, which may have been molded, and the wires from the transformers are then soldered onto the pins. The pins are then fully inserted into the package.

Since McCormick requires the soldering be done after the package is molded (for a molded package) but before the pins are fully inserted, the pins cannot be molded into the package. Applicant respectfully submits a “terminal pin molded” within the package is not shown or taught by McCormick.

Applicant respectfully submits that the second package of McCormick has the terminal pins plated onto an interior surface of the package after the package is molded. The pins cannot be molded into the package; that is, a “terminal pin molded” within the package is not taught by McCormick; rather the pins are plated on the molded package.

Applicant respectfully submits that the terminal pins of Matsumura do not teach a gull wing terminal pin molded within the side wall of the package. Applicant respectfully submits that neither the Z shape pin of Matsumura nor the gull wing terminal pin of the prior art discussed by Matsumura could be partially inserted in a completed molded package, soldered, then fully inserted as in the first package of McCormick. Applicant respectfully submits that neither the Z shape pin of Matsumura nor a gull wing terminal pin discussed by Matsumura could be plated onto a package as taught for the second package of McCormick.

Applicant respectfully submits that neither McCormick or Matsumura show or teach the simple, one piece, molded package of Applicant having terminal pins and notched terminal posts molded into the package.

The Examiner argues that Matsumura’s figure 9 shows a standoff as claimed in claim 7 of the present invention. Applicant respectfully traverses. Applicant respectfully submits that claim 7, as shown in element 10 of figures 3 and 4 in the present invention, relates to a standoff for spacing flexible gull wing terminals so that only the intended mating surfaces of the gull wing terminals contact the board. Applicant respectfully submits that Matsumura’s figure 9, as further disclosed in Matsumura’s figure 10A, discloses a stiff Z shape terminal with a vertical leg for spacing the part of the terminal not intended to mate with the board away from the board. Applicant respectfully submits that there is a part of the package of Matsumura that contacts the board, being element 46 in figure 10A, but element 46 is shown as not actually touching or otherwise supporting the terminal other than providing horizontal support to the vertical portion of the terminal. Applicant respectfully submits that element 46 of Matsumura helps prevent the vertical portion of the terminal of Matsumura from horizontal movement across the board, but has nothing to do with vertically spacing a portion of the terminal away from the board.

Applicant respectfully submits that the horizontal support for the vertical support portion of the terminal of Matsumura does not show or teach the standoff of the present invention, which provides vertical support to a portion of the terminal for spacing that portion of the terminal away from a board.

The Examiner further argues that Wilfinger discloses a reinforced beam located laterally along the bottom of the package [figure 1] to reinforce the mechanical strength of the package.

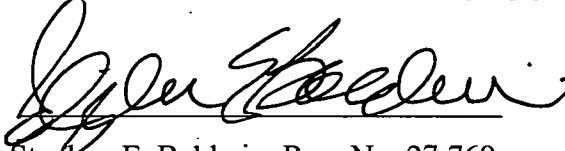
Applicant respectfully submits that reinforcement beams, which reinforce the mechanical strength of various objects, are known. However, applicant respectfully submits that the present invention is directed to reinforcement beam for reinforcing an electronics surface mount package. Wilfinger discloses a complex structure for providing reinforcement for a relatively large, complex, expensive container for spacecraft. Applicant respectfully submits that the complex reinforcements of Wilfinger, when combined with McCormick and Matsumura, do not show or teach the present invention.

Another version of the claims is separately attached herewith in accordance with 37 CFR 1.121 (c).

In view of the above, Applicant respectfully submits this application is now in a condition for allowance.

Respectfully submitted,

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37 CFR 1.121 (c) Version of Claims

1. (Once Amended) An electronic surface mount package for mounting onto a printed circuit board comprising:

a one piece construction package having a side wall and an open bottom,

a plurality of toroid transformers [carried] within said package, said toroid transformers each having wires wrapped thereon,

a plurality of terminal pins molded within and extending through and below a bottom of said side wall, one end of each of said pins having a notched solder post upon which said wires from said transformers are wrapped and soldered thereon, respectively,

the other end of each of said terminal pins extending in gull wing fashion outwardly from and below the bottom of the side wall for mounting onto the surface of the printed circuit board, and

at least one reinforcement beam located laterally along the bottom of said package to provide improved mechanical strength of said package.

2. (Once Amended) An electronic surface mount package for mounting onto a printed circuit board comprising:

a construction package having a side wall and an open bottom,

a plurality of toroid transformers [carried] within said package, said toroid transformers each having wires wrapped thereon,

a plurality of terminal pins molded within and extending through and below a bottom of said side wall, one end of each of said pins having a notched solder post upon which said wires from said transformers are wrapped and soldered thereon, respectively,

the other end of each of said terminal pins extending in gull wing fashion outwardly from and below the bottom of the side wall for mounting onto the surface of the printed circuit board, and

at least one reinforcement beam located laterally along the bottom of said package to provide improved mechanical strength of said package.

6. (Once Amended) An electronic surface mount package for mounting onto a printed circuit

board in an electronic device, said electronic surface mount package comprising:

a one piece construction package having a side wall and an open bottom,

a plurality of toroid transformers [carried] within said package, said toroid transformers each having wires wrapped thereon,

a plurality of terminal pins molded within and extending through and below a bottom of said side wall, one end of each of said pins having a notched solder post upon which said wires from said transformers are wrapped and soldered thereon, respectively,

the other end of each of said terminal pins extending in gull wing fashion outwardly from and below the bottom of the side wall for mounting onto the surface of the printed circuit board, and

at least one reinforcement beam located laterally along the bottom of said package to provide improved mechanical strength of said package.